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Making Tracks Toward the Environmental History of Brazil: A Personal Journey in Historical Geography

Fazendo Trilhas Rumo a História Ambiental Brasileira: Uma Viagem Pessoal em Geografia Histórica

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Abstract

This essay offers a brief personal history of engagement with the fields of historical geography and environmental history. Organized in three sections, working from past to present, the first part mainly reflects on research ideas gained while a student. Concern for the history of ideas about Brazilian land use led to interest in the important work of the German geographer Leo Waibel (1888-1951) concerning the tropics, and most especially Brazil. The second part of the essay reports on recent international research on Waibel. Some interamerican intellectual currents from Waibel's career are explored for the first time, including his prescient preoccupation from 1939 to map "the catastrophic consequences" of deforestation across the tropical Americas. The work ends by drawing attention to the importance of the unpublished research of the University of California geographer Henry Bruman (1913-2005) on colonization in postwar Brazil. Although currently an obscure figure in Brazil, Bruman viewed himself as one of Waibel's intellectual successors.

Keywords: Environmental History; Historical Geography; Migration; Colonization; Frontier.

Resumo

Este artigo oferece uma breve história pessoal de envolvimento com os campos da geografia histórica e da história ambiental. Organizado em três seções, trabalhando do passado ao presente, a primeira parte reflete, principalmente, sobre as ideias de investigação obtidas

quando ainda estudante. A preocupação com a história das ideias sobre o uso da terra brasileira levou a um interesse no importante trabalho do geógrafo alemão Leo Waibel (1888-1951) sobre os trópicos, e mais especialmente o Brasil. A segunda parte do ensaio relata a recente pesquisa internacional sobre Waibel. Algumas correntes intelectuais interamericanas da carreira de Waibel são exploradas pela primeira vez, incluindo a sua preocupação presciente de 1939 para mapear "as consequências catastróficas" do desmatamento nas Américas tropicais. O trabalho termina chamando a atenção para a importância da pesquisa inédita do geógrafo da Universidade da Califórnia Henry Bruman (1913-2005) sobre a colonização do Brasil pós-guerra. Embora, atualmente, uma figura obscura no Brasil, Bruman via a si mesmo como um dos sucessores intelectuais de Waibel.

Palavras-Chave: História Ambiental; Geografia Histórica; Migração, Colonização; Fronteira.

Reflecting on the pathways that bring scholars to engage with the environmental humanities, Christof Mauch and Katie Ritson have argued that “perhaps it is a feature of environmental history in particular that our origins and our past stories shape our interests and our fields of enquiry in myriad ways”¹. The origin of my interest in the environmental humanities lies, I believe, with childhood experiences, most especially those of particular landscapes. I grew up on a mixed farm, in an English region that has been officially designated since 1964 an Area of Outstanding Natural Beauty, part of the Forest of Bowland. In the vernacular usage, I heard quite frequently as a child the comparative description “Switzerland of England,” used mainly with regard to portions of the valley of the River Hodder. In a region still showing some Roman influence, and the vestiges of the medieval forest clearance (this latter reflected in the irregular boundaries of the fields with their sunken lanes), it was easily grasped even in childhood that the diverse local landscapes reflected multiple layers of human intervention. Although the sources of my interest in geography were probably highly specific and local, even to the microlevel of appreciation for particular trees on the family farm (notably the ancient oaks and a single yew in the garden), somewhere in my secondary English education, a fascination with Brazil, the world’s largest tropical country, took hold.

The sources of this Brazilian interest remain elusive to me. They are certainly linked in part with the high quality of the geography teaching in my traditional grammar school. But I suspect my sense of the scale of Brazil’s geographical transformation during the early 1970s also drew me toward this country. During the two years of my sixth-form education, I became an inveterate reader of Britain’s “quality” newspapers, which contained articles on such Brazilian topics as rural-

urban migration and the vast urban growth of São Paulo, or the desperate problems of the indigenous along parts of the Amazon frontiers. Yet even if so many of the interesting Brazilian stories monitored urban issues, my enthusiasms were no doubt affected by the fact that my roots were resolutely agrarian.

Strong interests in both history and geography led to the view that Oxford University would be a good fit for me. I spent the years 1975-78 studying within the School of Geography. Since my college, Queen's, had no fellow in geography (to the best of my knowledge geographers have run to only a few more than a dozen on the matriculation rolls there since the foundation of this institution in 1341), our 1975 student matriculation cohort of four had work to do when persuading staff elsewhere across the university to give us tutorials. The main advantage of this was exposure to a range of specialisms and personalities. Although the curriculum provided breadth in the study of geography, I was drawn eventually toward the study of historical geography, an interest fostered by Frank Emery of St. Peter's College, and the holder of a formal university lectureship in this field since 1958.² Along the three years of the undergraduate honour degree program, nobody within a wide range of teachers gave me more spirited tutorials than Emery. Although his interests were extremely diverse, the curriculum at the time was still heavily infused by considerations of what landscapes represented. During my undergraduate studies, I remember hearing visiting lectures given by Clifford Darby (1909-1992), author of the classic study treating the reclamation through drainage of the fenlands of East Anglia (Darby 1940). Darby was without question for a long time the leading authority for historical geography in the English-speaking world, in part for his sustained efforts to develop research methods; he was eventually knighted for his services to historical geography (Darby 2002). The fenland study served as an excellent case of what Darby termed a "vertical theme," a work that followed the transformation of a specific regional system through time. This was initially of greater appeal to me than his vast research efforts involving cross-sectional reconstructions, especially those based on the famous Domesday Book. If these methods seem robbed today of the vitality they were once seen to hold, they still do have enduring value, something pleasing to acknowledge in the preparation of my Ph.D. thesis examining the transformation of the Campanha region of Rio Grande do Sul³.

I also listened to W.G. Hoskins (1908-1992), famous for his book *The Making of the English Landscape*, a study that continues to strike chords with readerships in the United Kingdom and beyond⁴. Hoskins's extended argument that so much could be traced through viewing the layers in tangible landscapes, the multiple human interventions, also feels dated in some ways today, where geographers and others have become much more attuned to probing the politics involved in

landscapes, including a major emphasis on their symbolic elements⁵. Even so, the methods contained in Hoskins's work show plenty of potential for use in seeking to understand specific landscapes of Brazil, especially those involving dramatic impositions of one cultural form upon another. The development of plantations within *quilombo* land, or the establishment of small commercial farms within forest resources once used for the livelihood of indigenous people, are just two examples that come to mind. Toward the end of my undergraduate studies, the historical geographer Michael Williams was a new appointment in the School of Geography (Clout 2010). Although I had little formal contact with him while an undergraduate, his writings have certainly had their impact on me. And his bibliography is one that in its earlier phases reveals clear inspiration drawn from both Darby and Hoskins (Williams 1970; Williams 1974). By the time my undergraduate studies drew to their close, my familiarity with North American approaches to cultural-historical geography was still very limited. My first exposure to the distinguished work of Carl O. Sauer (1889-1975), and the oft-termed Berkeley School, came through a visiting lecture given by the Toronto historical geographer Jock Galloway, who was spending a sabbatical period of research at Emmanuel College, Cambridge. While Galloway's lecture was stimulating to me for its fresh perspectives, even better was the prospect of finding the scholar who could help me develop my graduate work, since we shared an interest in the historical geography of Brazil. Thus the University of Toronto made a great deal of sense to me as the base for my graduate education.

I have always regarded myself very lucky to have found my way to Jock Galloway as my supervisor, not the least for the caliber of his scholarship. Galloway's own graduate studies encompassed both the University of California at Berkeley and then University College, London, where he was a student of Darby. Darby encouraged some of his students to take the methods of British historical geography and apply them elsewhere in the world. Galloway, who gained the Ph.D. in 1965, wrote his thesis on the historical geography of Pernambuco, a truly rare, but path breaking, topic for a British geographical thesis. This became the gateway for a series of distinguished publications on the historical geography of sugar (Galloway 1989). Darby's other student to work in a similar vein was David Robinson, who was awarded the Ph.D. in 1967. Robinson is today the Dellplain Professor of Latin American Geography at Syracuse University. His contributions to Latin American historical geography have been legion, many of them involving colonial Spanish America.

In any varied academic career, an individual may feel they have lived through Golden Ages. In my case, the beginning part of my graduate education at the University of Toronto felt this way. In part this was a matter of fitting in at a time and place⁶. There never seems to have been such

time to read so widely since. But certain authors and their works had a profound influence on me. I was drawn strongly toward the work of historians of Latin America whose studies were framed through what seemed to me historical geographical perspectives. The books of James Scobie on Argentina were a strong case in point⁷. Where Brazil was concerned, I paid extremely close attention to Warren Dean's study *Rio Claro* (Dean 1976). For a geographer, a coffee frontier moving through time and space for the greater part of nearly two centuries is a dramatic theme. Dean's case study offers so much on labor systems, above all on the structures of slavery and its abolition. But Dean was also compelling on the physical environment, setting the stage for the remainder of his research agenda for a scholar who would lead the development of Latin American environmental history. Moving beyond English, the work of greatest importance for drawing my attention toward southern Brazil was undoubtedly the true magnum opus of the late Jean Roche (1917-2006) on the history and geography of German colonization in Rio Grande do Sul. I skimmed the French published version of Roche's thesis (a figure still alive as Monsieur Roche in the folk memory of some quarters of Porto Alegre three decades beyond his fieldwork), but read closely the two-volume Brazilian translation, a work that also stood as a landmark in the development of my reading knowledge of Portuguese⁸.

I retain an unbroken admiration for what Roche achieved in his study, one based on truly deep field experience, and a longer *vivência* with Brazil than most foreign scholars have been able to manage. The study is remarkably detailed on almost all aspects of the German experience of colonization and integration in Rio Grande do Sul down to around 1950. A number of the findings stick in the memory. First, we gain from Roche an understanding that the small-farmer colonization model used across southern Brazil was rarely sustainable. Thus it was not long after the foundation of the initial German colony at São Leopoldo in 1824 that the sons and daughters in many of the immigrant families were already looking for land elsewhere. The concept of sustainability was not yet so visible in the literature when Roche wrote as it is today, but his book shows clearly the restlessness of the colonization model used. Roche also pointed out that this in turn set in train considerable migration flows into other regions of Brazil that were already huge in scale before 1950, yet had then received relatively little comment in scholarship. Again, it seems to me that Roche prefigured something of vital importance in his book, that people of southern Brazilian small farmer descent would become important steering agents in the occupation and modification of land in other parts of Brazil. But when I first read Roche's book as a beginning graduate student, one crucial element was missing in my appreciation, namely the environmental impress of the colonization efforts, leading to the near-total removal of the band of subtropical forest along the Serra of Rio Grande do Sul. Roche was concerned mainly with the economic and social

development of communities, not so much their impact on the physical environment. How much has the historiography of historical development in Brazil changed then within only a few decades.

Following a long detour to reconstruct the southern South American career of the French botanist and medical doctor Aimé Bonpland (1773-1858), famously the first major research collaborator of Alexander von Humboldt, and in his own right an astute observer of changing environments within the Río de la Plata, I have been working for some time now on the transformation of Brazil during the century 1850-1950 (Bell 2010). My main interest here is shifts in the perception of natural resources. For centuries, cultivation of crops in Brazil meant the use of once-forested land. In his final and most ambitious book, the late Warren Dean gave a sweeping interpretation of Brazil through the lens of the removal of the South Atlantic forest (Dean 1995). Beginning in the 1940s, however, questions began to be raised about whether other ecosystems could offer promise for agriculture. In this, a key figure was the German geographer Leo Waibel (1888-1951). Waibel served as a most dynamic head of the Geographical Institute at the University of Bonn, until stripped of his post in 1937 by the Nazi government. Following a period of exile in the United States, he worked for Brazil's federal Conselho Nacional de Geografia between 1946-50, educating an important cohort of Brazilian graduate students.

My interest in Waibel began in the fall of 1978, when I was a beginning graduate student at the University of Toronto and reading widely about earlier work accomplished by international geographers on Brazil. It piqued my curiosity that here was a scholar whose career began with publications in imperial Germany, then moved into English while in exile, and later Portuguese while working in Brazil. Above all, Waibel was attractive to me for his bold vision of things. Making the argument at the end of the 1940s that the center-west region of Brazil would some day become a region of huge importance for agriculture was not yet one backed by much empirical evidence. Yet Waibel saw the *campo cerrado* and its vast, empty plateaus as something akin to the forests of Central Europe, systems that were eventually reevaluated through a long phase of medieval pioneering.

Around A.D. 500, a farmer on the German *loess* soils probably held the opinion that only grasslands could be cultivated and that the forests would merely serve for feeding pigs. He would be considerably surprised to see how the former forests were now transformed into fertile grasslands and into planted pastures.

I am personally convinced that in a not very distant future the best soil types of the *campo cerrado* on the Planalto Central will be cultivated in a similar way to the former forest lands of Central Europe.⁹

Recent International Research on Waibel

While resident at the Rachel Carson Center in Munich during the summer of 2011, it gave me immense pleasure to deliver a lecture at the University of Bonn, under the title “No Country in the World has a more Exciting Pioneer Fringe: Leo Waibel’s Singular Journey from Bonn to Brazil”¹⁰. The first part of this title comes from a comment made by the famous American geographer Isaiah Bowman (1878-1950), in one of his letters encouraging Waibel in 1946 to take up the offer of a government appointment in Brazil. An early volume of the University of Bonn’s distinguished *Colloquium Geographicum*, a series founded by Waibel’s successor Carl Troll, provided the posthumous publication in 1955 of Waibel’s findings about the generally failed nature of European colonization in southern Brazil, a record that included much environmental destruction (Waibel 1955). Stimulated in part by my lecture, Winfried Schenk undertook the task of publishing 58 years later a new volume on Waibel. Within this valuable collection of essays, Gerd Kohlhepp has provided a magisterial evaluation of Waibel’s significance for the development of Brazilian geography, an exercise that usefully includes consideration of how threads of intellectual co-operation have connected aspects of the academy in Germany and Brazil along the second half of the twentieth century (Kohlhepp 2013).

The new volume on Waibel opens with a reprinting once more of the subject’s reflections upon his sixtieth birthday within a diary entry made in southern Brazil. In these, he laid out his research themes to complete, envisaging studies of the role of the tropics as a future space for the settlement of humankind, the geographical basis of the tropical Americas, and the colonization of Brazil. While Schenk’s study deals with Brazil, Africa and Germany, another part of Waibel’s life deserving closer scrutiny is his time in the United States between 1939 and 1946¹¹. Methodologically, Waibel’s most singular achievement during his American exile to my reading was the exercise of reconstructing Cuba’s original vegetation based on the study of toponymy (Waibel 1943).

But two threads warrant a brief discussion here within the framework of international exchanges of ideas about environments, both from 1939, Waibel’s initial year of exile from Germany¹². Although I have found nothing directly yet in his archives on the topic, Waibel participated in a US national institute dealing with Latin American Studies at the University of Michigan during the summer of 1939. That summer school took a strong pan-American perspective. It is today seen as an important stepping stone for the development of area studies within US universities in the period following World War Two (Hoffnung-Garskof 2012). The list of other participants is suggestive of unrealized potential synergies. It includes the famous Brazilian

polymath Gilberto Freyre (1900-1987)¹³. And a conference on land tenure and agricultural systems took place under the supervision of the Berkeley geographer Carl Sauer (Aiton 1939). A leading authority within American geography, Sauer shared many interests with Waibel, yet he had been unsupportive of plans to bring his German colleague into the American academy at the end of 1938. The Michigan conference seems to have played some role in enhancing Waibel's interest in Brazil.

A further suggestive fragment of unexplored interamerican intellectual currents from the same year is Waibel's correspondence with the Tyrolean scholar Paul Waitz (1876-1961), who was then based in Mexico. Just when and where Waibel had earlier established a collaboration in person with Waitz is currently unknown to me. But Waitz represented a clear lead for Waibel in the search for authorities across the Americas who could inform him in 1939 about the nature and degrees of slash-and-burn agriculture and of deforestation. The words "Bodenerosion" (soil erosion) and "Feuer" (fire), written in Waibel's bold hand on Waitz's September 1939 reply (one where a paragraph, reflecting on the recent outbreak of war in Europe, ends with the feisty words "Unheil Hitler"), provide some clue to Waibel's immediate intellectual preoccupations¹⁴. Waitz, a geochemist by training, but described within Mexico more broadly as a geochemist, petrographer and vulcanologist, devoted most of his professional career to the search for water, the quest for irrigated agriculture in his adopted country (Arellano 1963). He shared with Waibel an academic interest in the physical geography of the landforms of the American southwest, and he showed himself familiar with the work Waibel had published on the inselberg landscapes of Arizona and Sonora in 1928. Waitz reckoned to have seen similar phenomena in the Bolsón de Mapimí in northern Mexico. He was convinced neither by the explanations offered by Waibel nor the Harvard scholar Kirk Bryan for the formation of these landforms, but maintained he had nothing better to put in their place. Waitz showed something in common with what Waibel would shortly experience in Brazil. He worked on an extensive scale, noting that he had traveled 13,000 kilometers during the past three months. Through his work in consulting geology, and notably the construction of dams, Waitz gained a closer sense of soil erosion linked with agricultural patterns. He wrote a manuscript work on Mexico's soils, coming to the same conclusions as Stuart Chase in his book *Rich Land, Poor Land*¹⁵.

Waitz informed Waibel that Mexican forest conservation had made progress under the influence of Miguel Ángel de Quevedo (1862-1946)¹⁶. He saw the leading cases of the earlier deforestations as stemming from three causes: a) carelessness; b) "Raubbau," meaning exploitative patterns of use, mainly for the supply of railways and mines; c) strategic aims. Waitz claimed both the Spanish authorities and the Mexican revolutionaries had looked askance at wooded areas

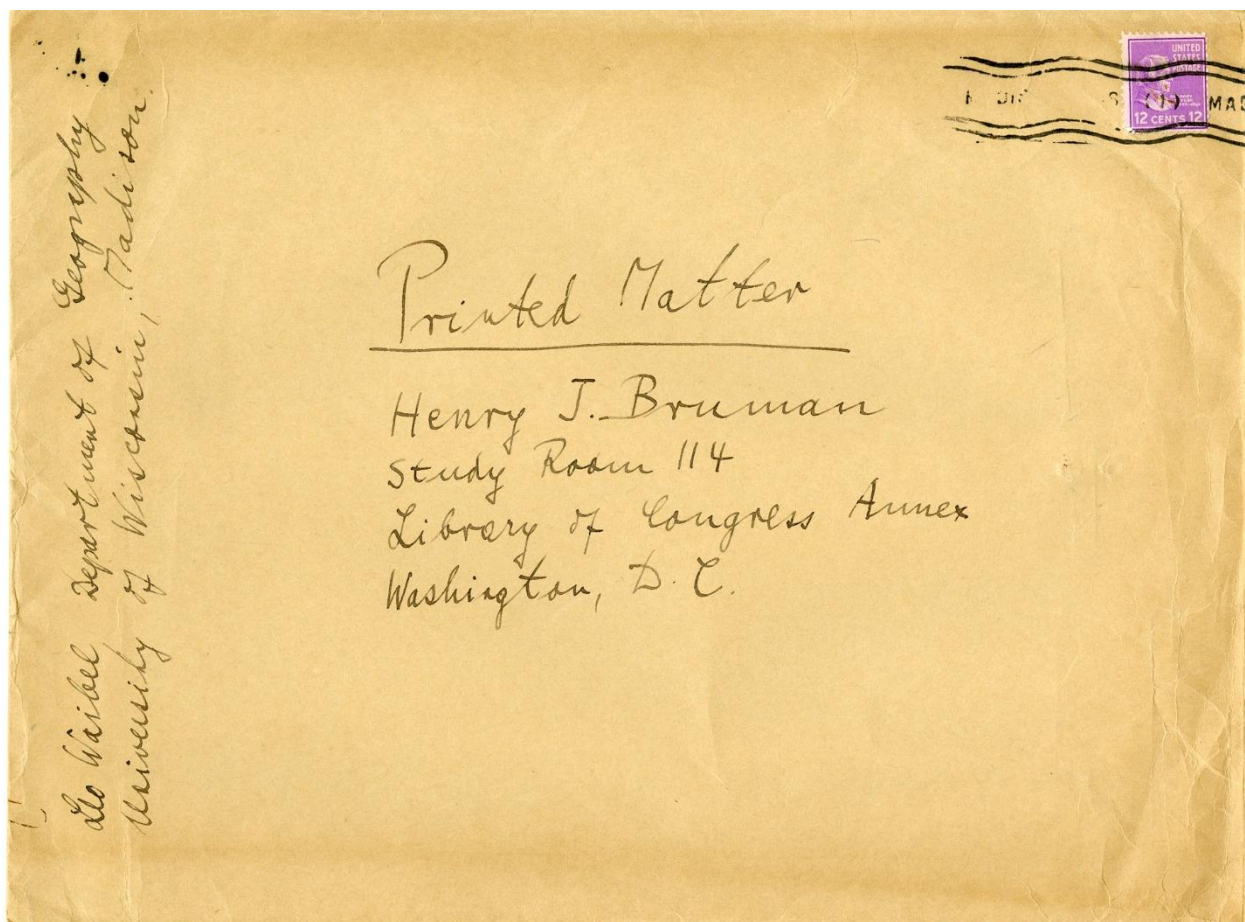
because they offered potential cover to resisters. He recounted personal experiences of witnessing forest removal in Durango and noted the impact of the burning of the mesquite forests on the plains of northern Mexico.

Inspired by Waitz, Waibel wrote in French to the Paris-educated civil engineer and conservationist Quevedo, telling him that since April 1939 he had been working to revise a study on “Shifting cultivation (milpa agriculture) and forest devastation in Tropical America”¹⁷. These concerns about ecological destruction were inspired by his own fieldwork observations in Central America, beginning in 1925. Waibel had read additional literature on Colombia and on Brazil, confirming that forests in these countries had also been devastated in the same irresponsible manner. This led in turn to Waibel’s prophetic claim that probably the tropical Americas as a whole “are going to feel in a few decades the catastrophic consequences of this system”¹⁸. As a geographer, he was trying to work out the distribution and extension of the affected regions, but the available literature did not give a satisfactory answer to this important question. Thus Waibel turned in his effort to prepare a map to leading authorities at the national scale across the countries of the tropical Americas. Where Venezuela was concerned, he already had a map from Henri Pittier¹⁹. Friedrich Freise had promised a similar thing for Brazil²⁰. For Colombia, Waibel envisaged the collaboration of Arnold Schultze²¹. Costa Rica and Guatemala he could handle based on his own research, leaving only Mexico and the West Indies remaining to document. Waibel praised Quevedo as the first authority in Mexico to recognize the gravity of deforestation there, asking him to send a “general map of the Mexican regions devastated by fire and by other human activities”²². These fragments provide important evidence of how Waibel in exile was working hard to maintain a career with an international reach.

Henry Bruman's Unpublished Research on Brazilian Colonization

The geographer Gerd Kohlhepp considers it almost tragic that Waibel did not live to witness the successful land use experiments of the postwar ethnic German (Danubianswabian) colonists on the grasslands of southern Brazil around Guarapuava, Paraná (Kohlhepp 2013). But the scholar I regard as my UCLA predecessor, notably as a Latin America specialist in geography, the Berlin-born Henry J. Bruman (1913-2005) served in his field research interests as a geographer who worked to carry forward Waibel’s concerns. Although Bruman never published from his extensive research on Brazil, his active records on the country, which mainly concern colonization issues, extend from 1944 until at least the 1970s²³.

Figure 1: An Envelope sent to Henry Bruman at the Library of Congress containing offprints of some of Leo Waibel's research articles.



Source: HBPSB

During a part of World War Two, Waibel and Bruman were both part of the staff on President Franklin Roosevelt's "M" project on refugee resettlement²⁴. Waibel worked on numerous cases of potential emigration regions, mainly concerning African and Central American examples, while Bruman worked on southern Brazil alone. We can only speculate about the degree to which any joint discussion took place between these research colleagues, although it is clear that Bruman's research ambitions in Brazil were influenced by the earlier work undertaken by Waibel. The only current concrete evidence of contact between the two researchers during this period is an envelope mailed by Waibel from the University of Wisconsin, Madison to Bruman in Study Room 114, located in an annex of the Library of Congress where the migration project was housed (Figure 1). Bruman received the assignment of assessing postwar colonization prospects in southern Brazil. In the course of around six months, aided by Genevieve Weder, a talented assistant, he researched and wrote one of the longest documents (R-112 runs to 283 pages including its appendixes) within his part of the overall "M" Project. Even a most cursory reading of Bruman's report reveals clear evidence, with its referencing of "pioneer fringes," that his work was influenced by the terminology

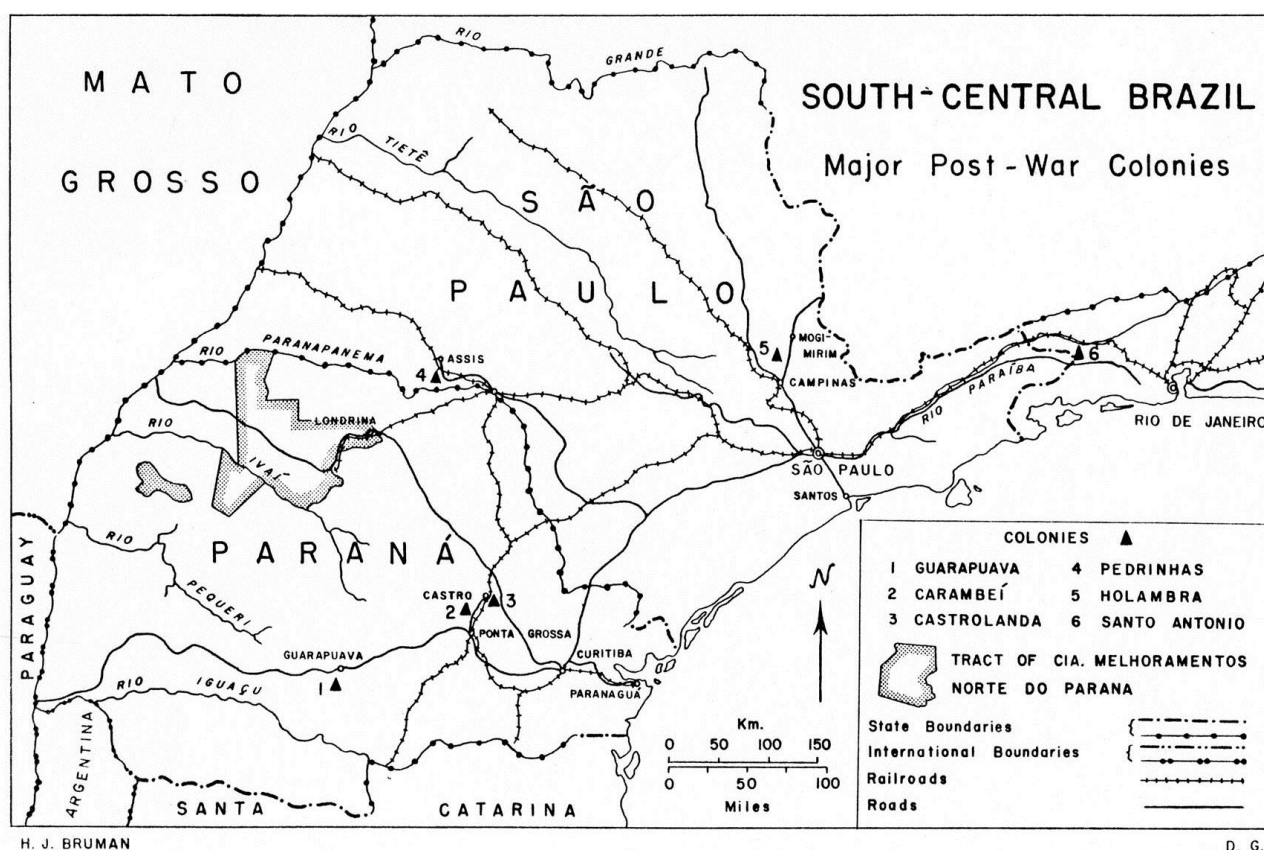
of Isaiah Bowman. Already 85 pages into his long report, Bruman argued in 1945 that “despite this somewhat tempered introduction, the possibilities of agricultural pioneering in Brazil are by no means second-rate. Actually they are enormous, probably greater than in all of Hispanic America, and the parallel that has sometimes been drawn between the Brazil of today and the United States of sixty or eighty years ago is by no means as inept as some critics have stated”²⁵. It is regrettable that reports such as Bruman’s could have little scholarly impact, since they stayed as classified material until June 1960. When a reckoning was finally made of the “M” Project, in the form of a book written by the former director, the anthropologist Henry Field, slips of memory appear to have been multiple²⁶.

Once based at UCLA, Bruman turned from library to field research on Brazil, where he mounted a well-conceived project during the 1950s to study postwar colonization. This treated both foreign and domestic populations. The research program began as an extremely ambitious one, funded by the Office of Naval Research (ONR), an institution where Bruman’s former Berkeley mentor Sauer served as the leading gatekeeper to funds (West 1979; Williams 2014). Sabbatical leave and ONR funding supported a full year of work beginning in August 1951 concerning colonization issues, with visits to parts of most South American countries. Before arriving in Brazil, where he would work for seven months during 1951-52, Bruman gained his first practical experience of colonization along the trip by spending a week at Sosúa in the Dominican Republic, a settlement founded to resettle wartime Viennese Jewish refugees²⁷. Within Brazil, a wide variety of cases received examination, including the federal colonies in Goiás and in Mato Grosso.

Despite gathering a wealth of information, Bruman stalled with the preparation of his research report for the ONR. He seems to have felt a genuine concern that colonization policies were simply too chaotic to assess during the early 1950s. In a letter written during 1956 to the head of the Geography Branch at the ONR, Bruman related that he realized in 1953 the need to return to Brazil to deepen his research: “I felt that a report turned in without restudy in the field of the situation as it had finally shaken down would simply not have done justice to the problem”²⁸. And thus a second sabbatical from UCLA along 1955-56 was divided between Europe and Brazil. It began with research at the headquarters of the Intergovernmental Committee for European Migration (ICEM) in Geneva, in the offices of the Food and Agriculture Organization (FAO) at Rome, and in the migration offices maintained by the governments of West Germany, the Netherlands and Italy. In January 1956, Bruman accompanied a shipload of Italian emigrants to Brazil, with the cost of his passage covered by the ICEM.

In 1958, Bruman cleared his obligation to the ONR by submitting his research report “Post-War Agricultural Colonization in Brazil”²⁹. This runs to just over a hundred pages, including fifteen pages of figures (maps and plans) of high quality. For example, Figure 2 depicts the leading post-war colonies across south-central and part of southern Brazil. By 1958, Bruman had visited most of these colonization areas more than once. But any scholar interested in Bruman’s work on Brazil would gain only a limited view of it by perusing his report for the ONR alone. The ONR study is based on a great deal of field observations but the sources of information are not documented in the main. And the list of maps in the front material does not include all the graphical material that he prepared. In short, Bruman had undertaken far more work in and on Brazil than his report conveyed.

Figure 2: The major postwar colonies of south-central Brazil.



Source: Bruman, “Post-war colonization in Brazil,” following p. 18.

Although Bruman’s subsequent field work visits of 1965 and 1970-71 became briefer, a matter of weeks and not of months, his findings for some of the key colonies gained a longitudinal quality, while he continued to add site visits to what were new locations for him. A visit to study Dutch colonists based at the expressively named Não-Me-Toque, Rio Grande do Sul during 1965 stands as just one example. A project conducted over decades, even if sustained with uneven intensity, has left a considerable amount of primary material, including interview notes with a wide

range of correspondents. These range from highly visible people around the subject of Brazilian colonization, such as Artur Hehl Neiva, the directors of the Companhia Melhoramentos Norte do Paraná, and René Bertholet (1907-1969), whose work with the Companhia Progresso Rural had such important consequences for settlement in the widely differing physical environments of Guarapuava, Paraná and Pindorama, Alagoas³⁰. They also include findings based on discussion with individual farmers from a wide range of social backgrounds.

Figure 3: First planting of coffee on partly cleared land. Near Ceres, Goiás.



Source: Photo taken in January 1952 by Henry Bruman, HBPSB.

Beyond the written materials in field notebooks, worked up material and correspondence, Bruman showed himself a keen user of photography as a research tool, as had been evident during his 1930s doctoral dissertation research in Mexico, and he showed some considerable talent for this. At the present, most of his photographic records of Brazilian work remain unsorted, but two examples reproduced here will give some indication of the potential of the quality of the historical source material. Figure 3 was taken in January 1952 during a very brief visit to the Colônia Agrícola Nacional de Goiás. It provides clear evidence of the deforestation taking place in order to prepare land for the planting of crops. And we gain an immediate sense of the immense labor involved in clearing land of tree stumps, around many of which coffee was already being planted.

By the time of his second extended visit to Brazil in 1956, Bruman had changed his camera to a Rolleicord bought in Munich, distinctive for its squarish images. His research during seven

months in 1956 appears to include undeveloped negatives, some of them taken in German and Dutch European colonies where pioneer work in the reassessment of Brazilian land potential was taking place. Figure 4 provides testimony to just how different the physical environments of parts of the grasslands of Paraná would have appeared to a geographer whose wider impressions of Brazil mainly concerned portions of the former South Atlantic Forest. This image was taken around the Dutch colony of Castrolanda (a place that would become of national significance for the quality of its dairy industry) when it was only around five years developed from its foundation. When Bruman first came to Brazil during 1951, and was conducting interviews at Rio de Janeiro, the first settlers in Castrolanda were noted as present on the high seas, meaning they were literally crossing the Atlantic. Although Figure 4 is most revealing on the physical environment - the viewer senses the grasses waving in the wind and note the stands of the Paraná pine (*Araucaria angustifolia*) visible in the middle distance - when viewed in detail human activity is also visible. Thus in one field loading of hay appears to be taking place.

Figure 4: Dutch pioneer settlement on the grasslands of Paraná. The Castrolanda district.



Source: Photo taken in April 1956 by Henry Bruman, HBPSB.

The material is of great importance for the environmental humanities, since it constitutes groundwork for the making of a land of the future, to paraphrase the European writer Stefan Zweig. Today, Brazil contains a foreign aid apparatus that provides agroindustrial technical assistance and policy consulting projects numbering in the hundreds, and involving almost every country of the tropical world. A new kind of regional, and more generally tropical, hegemony is quickly unfolding at present, visibly supported to great degree by both EMBRAPA, Brazil's agricultural research corporation, founded in 1973, and by the country's national development bank BNDES. Technical transfers across the southern hemisphere are now of huge importance. They have, however, considerable historical and geographical roots. It is my task as an environmental humanist to explicate these.

Notes

¹ Christof Mauch, Helmuth Trischler, Lawrence Culver, Shen Hou and Katie Ritson, eds., *Making Tracks: Human and Environmental Histories* (Munich: RCC Perspectives, 2013, no. 5), p. 5. The present essay is an expanded version of one requested from the Alumni Fellows of the Rachel Carson Center at the University of Munich. Exercises such as this can only be partial and they leave much of importance unsaid, not the least about experiences of mentorship, both within and beyond Brazil.

² Michael Williams, "Frank Vivian Emery, 1930-1987: An Appreciation," *Journal of Historical Geography* 14, no. 4 (1988): 451-54. I consider Emery's contributions to historical geography underappreciated. He had a direct impact on two of the figures discussed below. He served as the supervisor of Denis Cosgrove's graduate work at the University of Oxford and, while he was still on the faculty of the University of Wales during the 1950s, he influenced the work of Michael Williams.

³ Stephen Bell, *Campanha Gaúcha: A Brazilian Ranching System, 1850-1920* (Stanford CA: Stanford University Press, 1998). I felt echoes of Darby's concerns when reading David Blackbourn's most stimulating book *The Conquest of Nature: Water, Landscape and the Making of Modern Germany* (New York, W.W. Norton, 2006). For evidence that this was not without foundation, see especially pp. 3-19 and 368 n.24.

⁴ W.G. Hoskins, *The Making of the English Landscape* (London: Hodder and Stoughton, 1955). The success of this book led to the preparation of a series of county volumes, one of them written by my former tutor. See Frank Emery, *The Oxfordshire Landscape* (London: Hodder and Stoughton, 1974).

⁵ See especially Denis Cosgrove and Stephen Daniels, eds., *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments* (Cambridge: Cambridge University Press, 1988). Denis Cosgrove (1948-2008), my lamented former colleague, served as the first Alexander von Humboldt Professor in the Department of Geography at UCLA, a chair established through a gift made by the late Henry Bruman, a cultural-historical geographer of Latin America.

⁶ I consider myself very lucky to have worked as the research assistant sent to London in 1979 to work on British diplomatic records concerning Brazil in the preparation of the business historian Duncan McDowall's study *The Light: Brazilian Traction, Light and Power Company Limited, 1899-1945* (Toronto: University of Toronto Press, 1988). This experience allowed for the incorporation of a good deal of primary material within my 1980 unpublished M.A. research paper "Foreign Investment and the Historical Geography of Brazil, 1850-1930," Department of Geography, University of Toronto, 176 pages.

⁷ All of Scobie's work seems to me informed by historical geography. For example, his book on the transformation of the pampa shows a strong awareness of the importance of the physical environment, while his account of the growth of Buenos Aires is structured explicitly around a diachronic approach. See James R. Scobie, *Revolution on the Pampas: A Social History of Argentine Wheat, 1860-1910* (Austin: University of Texas Press, 1964) and *Buenos Aires: Plaza to Suburb, 1870-1910* (New York: Oxford University Press, 1974).

⁸ Jean Roche, *La colonisation allemande et le Rio Grande do Sul* (Paris: Institut des Hautes Études de l'Amérique Latine, 1959) and *A colonização alemã e o Rio Grande do Sul*, 2 vols., trans. Emery Ruas (Porto Alegre: Editora Globo, 1969 [1959]). My initial formal studies of Portuguese were greatly helped by Ricardo Sternberg, son of the late and distinguished Brazilian geographer Hilgard O'Reilly Sternberg, who was then new to the University of Toronto faculty. I recognize here my teacher's generosity of spirit.

⁹ Leo Waibel, “A vegetação e o uso da terra no planalto central,” in Leo Waibel, *Capítulos de geografia tropical e do Brasil*, 2d ed. (Rio de Janeiro: IBGE, 1979 [1958]), p. 218. The reprinted essays sometimes contain editorial comments made by Orlando Valverde, including about changing patterns of Brazilian land use since the original publication of this article in 1948. Valverde was also the translator of this particular original Waibel manuscript from German to Portuguese.

¹⁰ See the foreword in Winfried Schenk, ed., *Leo Waibel - Zur Rezeption seiner Arbeiten in Brasilien, Afrika und Deutschland*, Colloquium Geographicum of the Geographical Institute, University of Bonn, vol. 34 (Bergisch Gladbach: E. Ferger Verlag, 2013), p. 7.

¹¹ An article of mine on this phase of Waibel’s career nears completion.

¹² The current state of knowledge about Waibel’s career in the US in recent literature can only be described as weak. Although Waibel would eventually serve temporarily on the faculty of the University of Wisconsin, Madison, a recent inference that he “emigrated” there directly from Germany in 1941 misses the fact that he was resident in the US from 1939 onwards. See Michael Williams, *To Pass on a Good Earth: The Life and Work of Carl O. Sauer* (Charlottesville VA and London: University of Virginia Press, 2014), p. 70. Another authority mistakenly claims that Sauer employed Waibel within the University of California at Berkeley during World War Two. See César N. Caviedes, “Tradiciones geográficas modernas en los países de América del Sur,” in Robert B. Kent, Vicent Ortells Chabrera y Javier Soriano Martí, eds., *Bridging Cultural Geographies: Europe and Latin America* (Castello de la Planá: Publicacions de la Universitat Jaume I, 2005), pp. 46, 48, 54.

¹³ Freyre acknowledged Waibel’s help on the subject of the European colonization of the Americas, citing “a basic work that was recommended to me by Professor Leo Waibel, a colleague at the summer school of the University of Michigan, in 1939.” Gilberto Freyre, *The Masters and the Slaves: A Study in the Development of Brazilian Civilization*, 2d English-language ed., trans. Samuel Putnam (New York: Alfred A. Knopf, 1946), p. 27.

¹⁴ Waitz to Waibel, Mexico City, 10 Sept. 1939. I consulted this letter in September 2011 within the Waibel “Nachlass” (papers), then kept within the Geographical Institute of the University of Tübingen (hereafter LWNL). These materials have since been moved to the central archive for German geography at the Leibniz-Institut für Länderkunde in Leipzig.

¹⁵ Waitz’s work on soil regions would be published as “Los suelos de México y las posibilidades de futuros desarrollos agrícolas,” *Irrigación en México* 23, no. 6 (Nov.-Dec. 1942): 38-91; Stuart Chase, *Rich Land, Poor Land: A Study of Waste in the Natural Resources of America* (New York: Whittlesey House, 1936).

¹⁶ Dubbed “the tree apostle” for his conservationist work in Mexico, Quevedo forms the subject for Emily Wakild’s interesting article “It is to preserve life, to work for the trees”: The Steward of Mexico’s Forests, Miguel Angel Quevedo, 1862-1946,” *Forest History Today* (Spring/Fall 2006): 4-14. On Quevedo and environmental degradation, see also Andrew S. Mathews, *Instituting Nature: Authority, Expertise, and Power in Mexican Forests* (Cambridge MA: MIT Press, 2011), especially p. 40.

¹⁷ Waibel to Miguel Angel Quevedo, 19 Sept. 1939, LWNL.

¹⁸ Ibid.

¹⁹ Henri Pittier (1857-1950) was a Swiss-born scientist. Venezuela’s oldest national park carries his name.

²⁰ Friedrich Freise wrote widely on geographical topics in Brazil, but mainly on physical environmental ones. His subjects included the impact of slash-and-burn agriculture on the condition of tropical soils. Friedrich W. Freise, “Untersuchungen über die Folgen der Brandwirtschaft auf tropischen Boden. Beobachtungen aus dem Gebiete der Küstenwalder Brasiliens,” *Der Tropenpflanzer: Zeitschrift für Tropische Landwirtschaft* 42 (1939): 1-22.

²¹ The multi-faceted German entomologist Arnold Schultze (1875-1948) had a career showing a good number of similar features with Waibel’s own. For example, he did extensive work in both Africa, including Cameroon, and parts of the tropical Americas. Schultze’s university work included studies in geography and botany at the University of Bonn. Waibel was probably aware of the record of environmental destruction in Colombia, based on Schultze’s work during the 1920s as a land surveyor there. See Arnold Schultze, *Flammen in der Sierra Nevada de Santa Marta*, Mitteilungen der Geographischen Gesellschaft in Hamburg, vol. 45 (Hamburg, 1937), pp. 59-226. But Waibel’s timing cannot have worked for his stated plan to gain Schultze’s collaboration. Leaving Pará by sea on 29 August 1939, Schultze became caught in the British blockade of German shipping in the Atlantic. It is sad to learn that most of his extensive collections from the tropical Americas went to the bottom of the ocean. A case containing 18,000 butterfly specimens that were sent through the Colombian postal service to Berlin survived. See Tilman Spreckelsen, “Ein Koffer voller Schmetterlinge,” *Frankfurter Allgemeine Zeitung*, 28 Sept. 2010; Hanna Zeckau and Hans Zischler’s recent book about Schultze, *Der Schmetterlingskoffer* (Berlin: Verlag Galiani, 2010), has been described as an ecological thriller.

²² Waibel to Quevedo, 19 Sept. 1939, LWNL.

²³ Bruman had undertaken graduate studies at Berkeley in the 1930s, under the direction of Sauer. He is currently remembered more for his work on Mexico than any on Brazil. See, for example, his *Alcohol in Ancient Mexico* (Salt Lake City: University of Utah Press, 2000). There is a formal collection of Bruman archival materials; this is the Henry J. Bruman Papers (Collection 1665), UCLA Library Special Collections, Charles E. Young Research Library, University of California, Los Angeles. However, there are extensive further materials currently in my possession, courtesy of Dr. Ronald Lockmann, Henry Bruman Papers, personal archive of Stephen Bell (hereafter HBPSB). These records await a detailed assessment.

²⁴ Neil Smith argued that Bowman's pioneer research "did not catch on" in twentieth-century geography, yet the work of such scholars as Waibel and Bruman offers strong evidence to the contrary. See Neil Smith, *American Empire: Roosevelt's Geographer and the Prelude to Globalization* (Berkeley and Los Angeles: University of California Press, 2003), especially pp. 232, 299-304.

²⁵ "The pioneer fringe of Brazil is without doubt the most promising land still remaining to be settled on the face of the globe." Tempering this optimism, Bruman warned against colonization in Goiás and Mato Grosso on account of their remoteness; see his "Post-war Immigration Possibilities in Southern Brazil," prepared in 1945 for a War Agency of the U.S. Government, p. 85. This document with its appendixes constituted report R-112 of the "M" Project research series (mimeo, 7 Feb. 1945), 283 pages.

²⁶ In one of several prefaces he wrote for his uncompleted work on Brazilian colonization, Bruman noted the following of his "M" Project study: "In Field's report, the monograph is given an erroneous title on p. 83 but is listed with its proper title on p. 352. It was not summarized in the main text of the report nor included in the analytical index. No mention of the author or his assistant is given in the list of staff." Henry J. Bruman, unpublished preface (a typescript of seven numbered pages) to a work completed c. 1972, pp. 6-7 n. 4. The "erroneous title" printed in Field's book is the anthropologically loaded one of "Southern Brazil as a Theater of Postwar Civilization." Bruman accepted "Southern Brazil as a Theater of Postwar Colonization" as the correct title of his work, but the copy of his report in my possession is headed "Post-war Immigration Possibilities in Southern Brazil." See also Bruman to Field, 22 July 1962, which includes the correspondent's "mild disappointment" at the errors and omissions concerning his work within Field's extensive report. The letter also makes the telling observation "I had no idea at the time I was working for you that the scope of the Project was so vast," HBPSB. It is interesting that Bruman never to my current knowledge offered any comment on an earlier "M" Project report on southern Brazil. This is research report R-19 "Settlement Possibilities in Southern Brazil" (mimeo, 28 Sept. 1943), 278 pages. Most of the content of this earlier 1943 report concerns German Jewish emigration issues, especially the activities of the company Jüdische Landarbeit in Paraná. Henry Field, 'M' Project for F.D.R.; *Studies on Migration and Settlement* (Ann Arbor MI: Edwards Brothers, 1962), especially pp. 16-17, 83, 349, 352.

²⁷ See Allen Wells, *Tropical Zion: General Trujillo, FDR, and the Jews of Sosúa* (Durham NC and London: Duke University Press, 2009). On the colony, see also Smith, *American Empire*, especially p. 299.

²⁸ Bruman to Walter H. Bailey, Geography Branch, Office of Naval Research, 25 July 1956, HBPSB.

²⁹ Henry J. Bruman, "Post-War Agricultural Colonization in Brazil," Department of Geography, University of California, Los Angeles, Technical Report, ONR Contract Nonr 233 (03) (mimeo, 1958), 99 pages, 9 maps. Figures prepared but not used within the report concern the Santo Antônio colony in the state of Rio de Janeiro, the Italian colony at Pedrinhas in São Paulo and the lands of the Companhia Melhoramentos Norte do Paraná.

³⁰ The Swiss-born René Bertholet, laid to rest at Pindorama (a place that still commemorates his immense efforts at cooperative development), had a remarkable career resisting Nazism before he came to Brazil. There is fascinating material on this within Jef Rens, *Rencontres avec le siècle: une vie au service de la justice sociale* (Paris: Duculot, 1987).

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